Technical Datasheet

Item Description
Item ID

PRE-ELEC® PP 18147
PP18147

PP extrusion compound
Very high electrical conductivity

Typical end product
EMI-Shielding layers

Applications

PRE-ELEC® PP 18147 is a very conductive thermoplastic compound based on polypropylene. In addition to low electrical resistivity it has an excellent balance of mechanical properties.

Special properties	Unit	Value	Method
Volume resistivity(*	Ω.cm	1	PRE021

General properties	Unit	Value	Method
Specific gravity	g/cm3	1.25	ISO 1183
Melt flow rate at 230°C	g/10 min		ISO 1133
10.0 kg		0.1	
21.6 kg		1.3	

Mechanical properties	Unit	Value	Method
Tensile strength(*	MPa	15	ISO 527
Yield strength(*	MPa	15	ISO 527
Tensile strain at break(*	%	250	ISO 527
Tensile strain at yield(*	%	20	ISO 527
Flexural modulus	MPa	1400	ISO 178
Impact strength, Charpy	kJ/m2		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		20	
Hardness, Shore D(*	-	56	ISO 868

MFR is measured from granulates.
Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm
(* extruded tape; ISO 527-2 Type 1B, thickness 400 - 800 µm

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Processing instructions

Extrusion

	Unit	Processing range		
Cylinder temperature profile	°C	190	-	210
Die temperature profile	°C	200	-	220
Tool/Roll temperature	°C	-	-	-

Notes

Drying of the product is recommended for 2-3 hours at 80°C prior to use.

These parameters are for guidance only. The process parameters should always be optimized for the used equipment. The instructions of the equipment manufacturer should be followed. Caution should be taken when handling molten material as it is extremely hot and may cause severe burns.

Storage

Product-specific details are mentioned in the notes above. The general minimum shelf life for Premix's product is 3 years with the following conditions: 1) original package is unopened, 2) the storage area and conditions provide protection from direct sunlight and significant changes in storage temperature, 3) the product is pre-dried accordingly before use.